UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/909,865	07/23/2001	Shuichi Kagawa	2257-0193P-SP	1245

2292	7590	03/04/2004	EXAMINER

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EXAMINER
NGUYEN, KEVIN M

ART UNIT	PAPER NUMBER
2674	7

DATE MAILED: 03/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	**Applicant(s)**
Office Action Summary	09/909,865	KAGAWA ET AL.
	Examiner	**Art Unit**	
	Kevin M. Nguyen	2674	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _31 October 2003_.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-40_ is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) _4 and 24_ is/are allowed.

6)☒ Claim(s) _1-3,5-23 and 25-40_ is/are rejected.

7)☒ Claim(s) _4, 24_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _31 October 2003_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☒ All   b)☐ Some *   c)☐ None of:

   1.☒ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

The request for reconsideration filed on 12/18/2003 has been fully considered but

they are not persuasive. The rejections of claims 1-3, 5-20, 21-23 and 25-40 are

maintained. Claims 4 and 24 are objected.

Information Disclosure Statement

1.   The information disclosure statement filed 7/28/2001 which has been placed in

the application file, the information referred to therein has been considered as to the

merits.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3.   Claims 1-3, 5-20, 21-23 and 25-40 are rejected under 35 U.S.C. 102(e) as being

anticipated by Deguchi et al (US 6,480,202).

As to claims 1, 21, Deguchi et al teaches an image display device associated

with a method, the image display device comprising:

[recited in lines 3-6 of claim 1]

a black correction part (image processing section 100, fig. 16), Fig. 10 shows a

<u>predetermined number of color data</u> (see col. 7, line 59 through col. 8, line 1).

an image display means (a monitor 103, fig. 9);

[recited in lines 10-24 of claim 1]

<u>a black correction part</u> showing in fig. 16 (col. 24, lines 13-60) associated with a

processing operation of fig. 17 (col. 24, line 63) comprising:

a black-display characteristic specifying means (box of a basic characteristics

data, and a box of data for XYZ conversion (32 colors data or RGBmax + BLACK) fig.

16);

a black-approximated data calculating means (image processing 100, fig. 16)

including at least luminance (Y), chromaticity, and tristimulus (XYZ) values (see

equation 58 at column 28);

Now, the operation of the image processing section 100 will be discussed by

referring to the flow chart of FIG. 17. Note that the processing operation of FIG. 17 is

conducted for a self-emission type display. Firstly, in Step S41, the proportion law

evaluating section 711 of the evaluating section 701 receives digital signals (dr, dg, db)

as inputs (col. 24, lines 61-66).

Then, if it is determined in <u>Step S43</u> that a black isolation exists, the operation

proceeds to Step S51, where the user determines if the black isolation has to be

corrected or not. If a black isolation exists only slightly and hence is hardly observable,

it will be determined that the black isolation does not need to be corrected. If the black

isolation is clearly observable, it will be determined that the black isolation needs to be

corrected. Then, the processing operation proceeds to <u>Step S52</u>, where the TRC model

selecting section 715 determines if the monitor is a CRT or not. If the monitor is a CRT,

the operation proceeds to <u>Step S54</u>, where the TRC model selecting section 715

selects the GOGO model and the TRC preparing section 722 determines the

parameters for the GOGO model by means of a non-linear optimization technique,

using the data obtained by <u>subtracting</u> the XYZ3-stimulus values for input digital signals

of (0, 0, 0) from the XYZ3-stimulus values for the numerical tone of each of the three

colors of RGB and then also determines three TRCs as shown in equation (47) (col. 26,

line 64 through col. 27, line 14).

As to claims 2, 22, Deguchi et al teaches a black-correction processing executing

means 100 including a subtraction processing based on the black-approximated data

$X_{r,g,b,measured}$, $Y_{r,g,b,mearsured}$, $Z_{r,g,b,measured}$ from the predetermined number of color data

RGB (see equation 58).

As to claims 3, 23, Deguchi et al teaches the subtraction data including the black-

approximated data itself $X_{r,g,b,measured}-X_{k,min}$, $Y_{r,g,b,mearsured}-Y_{k,min}$, $Z_{r,g,b,measured}-Z_{k,min}$ (see

equation 58).

As to claims 5, 25, Deguchi et al teaches a black correction means 100 including

subtracting the XYZ3-stimulus values when the XYZ3-stimulus values is larger than the

input digital signals of (0,0,0) and outputting said data after subtraction as the black-

corrected image data (column 27, line 41).

As to claims 6, 26, Deguchi et al teaches the black-approximated data with a multiplication factor of less than 1 (see column 13, lines 55-67).

As to claims 7, 27, Deguchi et al teaches the black-correction processing executing means including a look-up table data (see figure 17, column 28, line 26).

As to claims 8, 28, Deguchi et al teaches the black-display characteristic specifying data including ambient light information reflected by monitor surface (see figure 10).

As to claims 9, 10, 29, 30 Deguchi et al teach a difference between the luminance (Y), tristimulus (x,y,z) based on the black-approximated data and the luminance, tristimulus are equal to the specified value (see equation 58).

As to claims 11-15, 31-35, Deguchi et al teaches the brightness, the kind of an external light, and the color temperature, the luminance (Y) (see figure 10), the chromaticity value and the mixing ratio (h'r, h'g,h'b) that provides a reference white point for the maximal quantities of light of R, G and B (see figure column 13, lines 12-38).

As to claims 16, 36, Deguchi et al teaches the black-display characteristic specifying data including a characteristic, luminance, chromaticity and tristimulus in displaying black with the monitor surface (see figure 16).

As to claims 17, 18, 37, 38, Deguchi et al teaches a difference between the luminance (Y), tristimulus (x,y,z) based on the black-approximated data and the luminance, tristimulus are equal to the specified value (see equation 58).

As to claims 19, 20, 39, 40, Deguchi et al teaches the brightness, and the luminance (Y) (see figure 10), the chromaticity value and the mixing ratio (h'r, h'g,h'b)

that provides a reference white point for the maximal quantities of light of R, G and B

(see figure column 13, lines 12-38).

Allowable Subject Matter

4.   Claims 4, 24 are objected to as being dependent upon a rejected base claim, but

would be allowable if rewritten in independent form including all of the limitations of the

base claim and any intervening claims.

5.   The following is a statement of reasons for the indication of allowable subject

matter:

Deguchi et al teach a limiter $0<r, g, b<1$ and $0<Y_{CRT}<1$ (column 13, line 67).

Accordingly, the cited prior art does not teach or fairly suggest a limiter setting a color

data of less than "0" in said predetermined number of color data contained in said data

after subtraction to "0", to obtain said black-corrected image data. This distinct feature

renders the above limitation is allowable.

Response to Arguments

6.   Applicant's arguments filed 10/31/2003 have been fully considered but they are

not persuasive.

In response to applicant's argument that claim 1 recites in [lines 14-24 of claim

1]. This argument is not persuasive because Deguchi's invention teaches a black

correction part showing in fig. 16, col. 24, lines 13-60 associated with a processing

operation of fig. 17 (col. 24, line 63) comprising:

Fig. 10 shows a predetermined number of color data (see col. 7, line 59 through

col. 8, line 1).

Now, the operation of the image processing section 100 will be discussed by referring to the flow chart of FIG. 17. Note that the processing operation of FIG. 17 is conducted for a self-emission type display. Firstly, in Step S41, the proportion law evaluating section 711 of the evaluating section 701 receives digital signals (dr, dg, db) as inputs (col. 24, lines 61-66).

Then, if it is determined in Step S43 that a black isolation exists, the operation proceeds to Step S51, where the user determines if the black isolation has to be corrected or not. If a black isolation exists only slightly and hence is hardly observable, it will be determined that the black isolation does not need to be corrected. If the black isolation is clearly observable, it will be determined that the black isolation needs to be corrected. Then, the processing operation proceeds to Step S52, where the TRC model selecting section 715 determines if the monitor is a CRT or not. If the monitor is a CRT, the operation proceeds to Step S54, where the TRC model selecting section 715 selects the GOGO model and the TRC preparing section 722 determines the parameters for the GOGO model by means of a non-linear optimization technique, using the data obtained by subtracting the XYZ3-stimulus values for input digital signals of (0, 0, 0) from the XYZ3-stimulus values for the numerical tone of each of the three colors of RGB and then also determines three TRCs as shown in equation (47) (col. 26, line 64 through col. 27, line 14).

For these reasons, the rejections based on Deguchi et al have been maintained.

Conclusion

7.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

8.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to **Kevin M. Nguyen** whose telephone number is **703-305-**

6209. The examiner can normally be reached on MON-THU from 9:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, **Richard A Hjerpe** can be reached on **703-305-4709**.

        Any response to this action should be mailed to:

                Commissioner of Patents and Trademarks

                Washington, D.C. 20231

        or faxed to:

                (703) 872-9314 (for Technology Center 2600 only)

Hand-delivered response should be brought to Crystal Park II, 2121 Crystal

Drive, Arlington, VA, Sixth floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the Technology Center 2600 Customer Service Office

whose telephone number is (703) 306-0377.

Kevin M. Nguyen
Patent Examiner
Art Unit 2674

XIAO WU
PRIMARY EXAMINER